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APPLICATION NO.	FILING DATE	FIRST NAMED INVENTOR	ATTORNEY DOCKET NO.	CONFIRMATION NO.
10/727,947	12/03/2003	Guy Blalock	MICR112.02	7408

7590 07/01/2005

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EXAMINER	
WILCZEWSKI, MARY A	
ART UNIT	**PAPER NUMBER**
2822	

DATE MAILED: 07/01/2005

Please find below and/or attached an Office communication concerning this application or proceeding.

Office Action Summary	Application No.	Applicant(s)	
	10/727,947	BLALOCK	
	Examiner	Art Unit	
	M. Wilczewski	2822	

-- The MAILING DATE of this communication appears on the cover sheet with the correspondence address --

Period for Reply

A SHORTENED STATUTORY PERIOD FOR REPLY IS SET TO EXPIRE 3 MONTH(S) FROM THE MAILING DATE OF THIS COMMUNICATION.

- Extensions of time may be available under the provisions of 37 CFR 1.136(a). In no event, however, may a reply be timely filed after SIX (6) MONTHS from the mailing date of this communication.
- If the period for reply specified above is less than thirty (30) days, a reply within the statutory minimum of thirty (30) days will be considered timely.
- If NO period for reply is specified above, the maximum statutory period will apply and will expire SIX (6) MONTHS from the mailing date of this communication.
- Failure to reply within the set or extended period for reply will, by statute, cause the application to become ABANDONED (35 U.S.C. § 133). Any reply received by the Office later than three months after the mailing date of this communication, even if timely filed, may reduce any earned patent term adjustment. See 37 CFR 1.704(b).

Status

1)☒ Responsive to communication(s) filed on *03 December 2003*.

2a)☐ This action is **FINAL**. 2b)☒ This action is non-final.

3)☐ Since this application is in condition for allowance except for formal matters, prosecution as to the merits is closed in accordance with the practice under *Ex parte Quayle*, 1935 C.D. 11, 453 O.G. 213.

Disposition of Claims

4)☒ Claim(s) *14-22* is/are pending in the application.

4a) Of the above claim(s) _____ is/are withdrawn from consideration.

5)☐ Claim(s) _____ is/are allowed.

6)☒ Claim(s) *14-22* is/are rejected.

7)☐ Claim(s) _____ is/are objected to.

8)☐ Claim(s) _____ are subject to restriction and/or election requirement.

Application Papers

9)☐ The specification is objected to by the Examiner.

10)☒ The drawing(s) filed on *03 December 2003* is/are: a)☒ accepted or b)☐ objected to by the Examiner.

Applicant may not request that any objection to the drawing(s) be held in abeyance. See 37 CFR 1.85(a).

Replacement drawing sheet(s) including the correction is required if the drawing(s) is objected to. See 37 CFR 1.121(d).

11)☐ The oath or declaration is objected to by the Examiner. Note the attached Office Action or form PTO-152.

Priority under 35 U.S.C. § 119

12)☐ Acknowledgment is made of a claim for foreign priority under 35 U.S.C. § 119(a)-(d) or (f).

a)☐ All b)☐ Some * c)☐ None of:

1.☐ Certified copies of the priority documents have been received.

2.☐ Certified copies of the priority documents have been received in Application No. _____.

3.☐ Copies of the certified copies of the priority documents have been received in this National Stage application from the International Bureau (PCT Rule 17.2(a)).

* See the attached detailed Office action for a list of the certified copies not received.

Attachment(s)

1) ☒ Notice of References Cited (PTO-892)
2) ☐ Notice of Draftsperson's Patent Drawing Review (PTO-948)
3) ☒ Information Disclosure Statement(s) (PTO-1449 or PTO/SB/08) Paper No(s)/Mail Date *03.12.2003*.
4) ☐ Interview Summary (PTO-413) Paper No(s)/Mail Date. _____.
5) ☐ Notice of Informal Patent Application (PTO-152)
6) ☐ Other: _____.

DETAILED ACTION

This Office action is in response to the Preliminary Amendment filed on December 3, 2003.

Drawings

The drawings filed on December 3, 2003, are acceptable.

Double Patenting

The nonstatutory double patenting rejection is based on a judicially created doctrine grounded in public policy (a policy reflected in the statute) so as to prevent the unjustified or improper timewise extension of the "right to exclude" granted by a patent and to prevent possible harassment by multiple assignees. See *In re Goodman*, 11 F.3d 1046, 29 USPQ2d 2010 (Fed. Cir. 1993); *In re Longi*, 759 F.2d 887, 225 USPQ 645 (Fed. Cir. 1985); *In re Van Ornum*, 686 F.2d 937, 214 USPQ 761 (CCPA 1982); *In re Vogel*, 422 F.2d 438, 164 USPQ 619 (CCPA 1970);and, *In re Thorington,* 418 F.2d 528, 163 USPQ 644 (CCPA 1969).

A timely filed terminal disclaimer in compliance with 37 CFR 1.321(c) may be used to overcome an actual or provisional rejection based on a nonstatutory double patenting ground provided the conflicting application or patent is shown to be commonly owned with this application. See 37 CFR 1.130(b).

Effective January 1, 1994, a registered attorney or agent of record may sign a terminal disclaimer. A terminal disclaimer signed by the assignee must fully comply with 37 CFR 3.73(b).

Claim 14 is rejected under the judicially created doctrine of obviousness-type double patenting as being unpatentable over claim 1 of U.S. Patent No. 6,674,158. Although the conflicting claims are not identical, they are not patentably distinct from each other because claim 14 of the present application is generic to claim 1 of the '158 patent.

Claim Rejections - 35 USC § 103

The following is a quotation of 35 U.S.C. 103(a) which forms the basis for all obviousness rejections set forth in this Office action:

> (a) A patent may not be obtained though the invention is not identically disclosed or described as set forth in section 102 of this title, if the differences between the subject matter sought to be patented and the prior art are such that the subject matter as a whole would have been obvious at the time the invention was made to a person having ordinary skill in the art to which said subject matter pertains. Patentability shall not be negatived by the manner in which the invention was made.

Claims 14, 15, 19, and 20 are rejected under 35 U.S.C. 103(a) as being unpatentable over Kovac et al., U.S. Patent 6,525,429, cited in Parent application Serial No. 10/086,907.

Kovac et al. disclose a semiconductor die package and a method of coating a semiconductor die with a polymer that is fully curable by exposure to ultraviolet light and that shrinks 10% or less by volume upon curing, see Figures 1 and 2. A semiconductor die 120 is coated with a compliant filler 170 which can comprise an elastomer, see column 6, lines 57-64. In column 5, Kovac et al. disclose an elastomer DOW 577 which shrinks approximately 5% during curing, see column 3, lines 60-63. It would have been obvious to one skilled in the art that the DOW 577 elastomer could have been used as the compliant filler 170, thereby yielding a semiconductor die package comprising a die 120 and conductive leads electrically connected to the die and a protective material 170 covering at least a portion of the die and at least a portion of the leads, wherein the protective material 170 is fully curable by exposure to ultraviolet light (column 3, lines 30-36) and shrinks less than 10% by volume upon curing (column 3, lines 60-63).

Claims 15-22 are rejected under 35 U.S.C. 103(a) as being unpatentable over Xu et al., U.S. Patent 6,168,898; cited in Parent application Serial No. 10/086,907; in view of Higgins, III et al., U.S. Patent 5,583,370, newly cited.

Xu et al. disclose a coating composition which comprises a mixture of a phenol-formaldehyde epoxy novolac resin (column 4, lines 32-35) and triaryl sulfonium hexafluorophosphate (column 3, lines 34-35), which is fully curable by exposure to ultraviolet light (column 7, lines 4+). Xu et al. disclose that the disclosed solution can be coated onto silicon wafers or gallium arsenide, see column 7, lines 22+. Admittedly, Xu et al. does not disclose that the disclosed composition can be coated onto a semiconductor die and conductive leads electrically connected to the die. However, it is known to in the art to employ polymeric coatings as encapsulants for semiconductor dies, see Figure 3 of Higgins, III et al. Higgins, III et al. disclose a semiconductor die package and a method of coating a semiconductor die package in which a radiation-curable polymeric solution 14' is coated onto at least a portion of a semiconductor die 12 and at least a portion of conductive leads 30 electrically connected to the die (see Figure 3). Coating 14' is an encapsulant, that is, a protective material, which comprises an epoxy and is curable by radiation, see column 7, lines 35-39. In light of the disclosure of Higgins, III et al., it would have been obvious to one skilled in the art that the composition disclosed by Xu et al. could be used as the encapsulant in the known method of Higgins, III et al., since the composition of Xu et al. is an epoxy-based resin and curable by radiation (UV). Alternately, in light of the teaching of Higgins, III et al., it would have been obvious to one skilled in the art that the composition of Xu et al. could

be used as an encapsulant for a semiconductor die, since Higgins, III et al. disclose that radiation-curable epoxy resins can be used as encapsulants for semiconductor dies.

Neither Xu et al. or Higgins, III et al. expressly disclose that the polymeric coating shrinks less than 10% upon curing. However, since Xu et al. discloses the same composition as presently claimed by Applicants, the coating composition of Xu et al. will *inherently* shrink less than 10 % upon curing.

Conclusion

The prior art made of record and not relied upon is considered pertinent to applicant's disclosure. The additionally cited references disclose the coating of various substrates with UV-curable polymeric coatings.

Any inquiry concerning this communication or earlier communications from the examiner should be directed to M. Wilczewski whose telephone number is (571) 272-1849. The examiner can normally be reached on Monday and Thursday.

If attempts to reach the examiner by telephone are unsuccessful, the examiner's supervisor, Amir Zarabian can be reached on 571-272-1852. The fax phone number for the organization where this application or proceeding is assigned is 703-872-9306.

Information regarding the status of an application may be obtained from the Patent Application Information Retrieval (PAIR) system. Status information for published applications may be obtained from either Private PAIR or Public PAIR. Status information for unpublished applications is available through Private PAIR only. For more information about the PAIR system, see http://pair-direct.uspto.gov. Should you have questions on access to the Private PAIR system, contact the Electronic Business Center (EBC) at 866-217-9197 (toll-free).

M. Wilczewski
Primary Examiner
Tech Center 2800